

CLAIMS

- 1 1. A method for sending data across a network, comprising:
2 associating sequence information with the data, the sequence information further
3 comprising a sequence number and an expected sequence number;
4 sending the data and associated sequence information to a remote location;
5 receiving the sent data and associated sequence information at the remote location; and
6 determining, based on the associated sequence information, whether the received sent
7 data should be accepted.
- 1 2. The method of claim 1, wherein the step of determining, based on the associated
2 sequence information, whether the received sent data should be accepted further comprises:
3 accepting the received sent data if the expected sequence number associated with the
4 received sent data matches a sequence number associated with data previously
5 received at the remote location.
- 1 3. The method of claim 1, wherein the step of determining, based on the associated
2 sequence information, whether the received sent data should be accepted further comprises:
3 rejecting the received sent data if the expected sequence number associated with the
4 received sent data does not match a sequence number associated with data previously
5 received at the remote location.
- 1 4. The method of claim 1, further comprising:
2 responsive to a determination that the received data should be accepted:
3 accepting the data; and

- 4 sending an acknowledgement indicating that the data has been accepted.
- 1 5. The method of claim 1, further comprising:
2 responsive to a determination that the received data should not be accepted:
3 sending a retry request indicating that the data has not been accepted.
- 1 6. A method for transmitting data across a network, comprising:
2 associating a sequence number with the data;
3 associating an expected sequence number with the data, the expected sequence number
4 related to data previously transmitted across the network; and
5 transmitting the data, associated sequence number and expected sequence number across
6 the network.
- 1 7. The method of claim 6, further comprising:
2 receiving a response indicating whether the data was successfully received by a remote
3 receiver; and
4 responsive to an indication that the data was not successfully received, re-sending the
5 data.
- 1 8. A method for receiving data sent across a network, comprising:
2 receiving a first data packet, the first data packet comprising data, a sequence number, an
3 expected sequence number, and a node-ID;
4 determining whether a second data packet has already been received, wherein the second
5 data packet has a sequence number corresponding to the expected sequence number
6 of the first data packet; and
7 responsive to a determination that the second data packet has already been received:
8 storing the data of the first data packet.

1 9. The method of claim 8, further comprising sending an acknowledgement
2 indicating that the first data packet has been stored.

1 10. The method of claim 8, further comprising:
2 responsive to a determination that the second data packet has not been received:
3 sending a retry request indicating that the first data packet was not accepted.

1 11. A method for sending data over a network, the data transmitted by a first device
2 coupled to a bus, the data written to a second device coupled to a second bus, the first bus and the
3 second bus each coupled to the network, the method comprising:
4 determining sequence information for the data, further comprising:
5 associating a sequence number with the data;
6 associating an expected sequence number with the data, the expected
7 sequence number related to other data previously transmitted over the
8 network;
9 transmitting the data over the network;
10 receiving response information indicating whether the data was accepted; and
11 responsive to an indication that the data was not accepted:
12 re-transmitting the data.

1 12. A method for writing first data received over a network to a device on a bus, the
2 method comprising:
3 determining sequence information associated with the first data, further comprising:
4 determining a sequence number associated with the first data;
5 determining an expected sequence number associated with the first data;
6 determining whether the expected sequence number corresponds to a sequence number of
7 second data previously received;

8 responsive to the expected sequence number corresponding to the sequence number of
9 the second data:

10 writing the first data to the bus;

11 sending an acknowledgement message; and

12 responsive to the expected sequence number not corresponding to the sequence
13 number of the second data, sending a retry request message.

1 13. A method for writing data to a device on a bus, comprising:

2 receiving a first data packet over a network, the first data packet comprising a sequence
3 number and a first data;

4 receiving a second data packet over the network, the second data packet comprising an
5 expected sequence number and a second data;

6 responsive to the expected sequence number corresponding to the sequence number:
7 storing the second data.

1 14. The method of claim 13 further comprising:

2 sending an acknowledgement message indicating that the second data has been stored.

1 15. The method of claim 13 further comprising:

2 responsive to the expected sequence number not corresponding to the sequence number:
3 sending a retry request message indicating that the second data has been
4 rejected.

1 16. A system for transferring a data packet across a network, the data packet comprising

2 data, a sequence number and an expected sequence number, the system comprising:

3 a sending module, for sending the data packet across the network, and further
4 comprising:

5 a bus communication module, for receiving the data from a bus;

6 a sequencing module, for assigning the sequence number and the expected
7 sequence number to the data packet;

8 a data transmission module, for transferring the data packet a receiving
9 module across the network;

10 the receiving module, coupled to the network, for receiving the data packet, and further
11 comprising:

12 a sequence table module, for determining whether the data packet has been
13 received in a correct order;

14 a data buffer for storing the data; and

15 an acknowledgement module, for sending an acknowledgement to the
16 sending module.

1 17. The system of claim 16, wherein the receiving module further comprises:

2 a request buffer for storing header information associated with the data packet; and

3 a DMA engine for writing the data to a bus.